

# PATENT ABSTRACTS OF JAPAN

(11) Publication number : 08-204288  
(43) Date of publication of application : 09.08.1996

(51) Int. Cl. H01S 3/18  
H01L 31/0232  
H01L 33/00

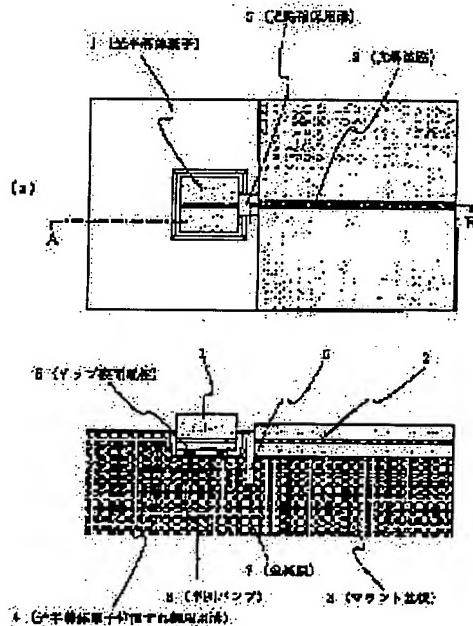
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## (54) OPTICAL SEMICONDUCTOR DEVICE

### (57) Abstract:

**PURPOSE:** To provide an optical semiconductor device in which an optical semiconductor element can be positioned with high accuracy without adjustment so as to improve the productivity of the device.

**CONSTITUTION:** In an optical semiconductor device which is provided with a mounting substrate 3 on which an optical waveguide 2 is formed and an optical semiconductor element 1 which is mounted on the substrate 3 and is optically coupled with the waveguide 2 and a rear-surface electrode 6 provided on the rear surface of the element 1 and a metallic film 7 formed on the substrate 3 are fixed with solder bumps 8, a recessed groove 4 is formed on the surface of the substrate 3 at the position to which the optical semiconductor element is fixed. Therefore, the occurrence of such a phenomenon that the electrode pattern of the element 1 is not connected to an electrode pattern on the substrate 3 due to the positional deviation of the element 1 before melting solder is eliminated.



### LEGAL STATUS

[Date of request for examination] 06.06.2000

[Date of sending the examiner's decision of rejection] 21.01.2003

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection] 2003-02208

[Date of requesting appeal against examiner's decision of rejection] 12.02.2003

[Date of extinction of right]

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